

IN THE CLAIMS:

Claims 2-44, 46-52, 57-62, 65, 67-72 and 74-79 have been cancelled. Claims 1, 45, 53, 63, 66 and 73 have been amended. New claims 80-157 are introduced into the application. All of the pending claims 1 through 157 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

1. (Currently amended) ~~"INDICATIVE~~ Temperature sensitive indicator~~SENSOR FOR STOCK CONTROL"~~ characterized by the fact of comprising a sensor (1) featuring comprising :

a ~~hollow~~ tube (2) ~~with~~ that comprises a first open end (3) ~~and~~ a second closed end (4);

~~a~~ an axially movable slidable piston to be assembled inside the tube (2) forming a first compartment comprised between the piston and the closed end and a second compartment comprised between the piston and the open end;

compressible means to be located ~~a fluid (O) or a spring (N) contained in a~~ inside the first compartment (C1); inside the tube (2), comprised between the piston (5) and the end (4);

a freezable fluid (H) ~~contained~~ to be located in a second compartment (C2); inside the tube (2), comprised between the piston (5) and the end (3);

a releasable cap to cover the first open end of the tube and to be responsible to hold the freezable fluid media to provide at least one indication of the occurrence of a temperature rise in the ambient in which the sensor (1) is immersed

wherein the temperature sensitive indicator is activated when the releasable cap is released by the frost action of the freezable fluid inside the second compartment and the temperature sensitive indicator reveals the occurrence of the temperature increase in the environment in which the indicator is immersed, by the irreversible motion of the piston in a single direction inside the tube when the freezable fluid inside the second

compartment thaws and flows out of the tube.

2.-44 (cancelled)

45. (currently amended) An indicator for stock control, comprising:  
a hollow tube having an open end and a closed end;  
a piston positioned inside the hollow tube, wherein the piston creates a first space between a first  
side of the piston and the open end and a second space between a second side of the piston  
and the closed end, the piston having a circumference in contact with the hollow tube;  
a first fluid in the first space;  
a force generating object in the second space; and  
media associated with the hollow tube to provide at least one indication of the occurrence of a  
temperature rise in an ambient in which the sensor is immersed  
~~The sensor of Claim 41,~~ wherein the force generating object comprises a gaseous fluid.

46.-52 (cancelled)

53. (currently amended) ~~The sensor of Claim 41,~~ An indicator for stock control,  
comprising:  
a hollow tube having an open end and a closed end;  
a piston positioned inside the hollow tube, wherein the piston creates a first space between a first  
side of the piston and the open end and a second space between a second side of the piston  
and the closed end, the piston having a circumference in contact with the hollow tube;  
a first fluid in the first space;  
a force generating object in the second space; and  
media associated with the hollow tube to provide at least one indication of the occurrence of a  
temperature rise in an ambient in which the sensor is immersed.  
further comprising movable laminar petals positioned within the hollow tube between the first  
space and the second space.

54. (previously presented) The sensor of Claim 53, wherein the movable laminar petals exhibit a closed position when the first fluid is in a frozen state within the first space.

55. (previously presented) The sensor of Claim 53, wherein the movable laminar petals exhibit an open position when the first fluid is in a non-frozen or partially thawed state.

56. (previously presented) The sensor of Claim 53, wherein the movable laminar petals and the piston feature colors that are contrast each other.

57.-62 (cancelled)

63. (currently amended) ~~The sensor of Claim 62,~~ An indicator for stock control, comprising:

a hollow tube having an open end and a closed end;

a piston positioned inside the hollow tube, wherein the piston creates a first space between a first side of the piston and the open end and a second space between a second side of the piston and the closed end, the piston having a circumference in contact with the hollow tube;

a first fluid in the first space;

a force generating object in the second space;

media associated with the hollow tube to provide at least one indication of the occurrence of a temperature rise in an ambient in which the sensor is immersed, and

a collecting receptor for collecting any first fluid expelled from the first space in the hollow tube wherein the collecting receptor further comprises an absorbent material for absorbing any first fluid collected by the collecting receptor.

64. (previously presented) The sensor of Claim 63, wherein the absorbent material comprises an absorbent material capable of reacting with the first fluid to promote a color change of the absorbent material.

65. (cancelled)

66. (currently amended) ~~The sensor of Claim 41,~~ An indicator for stock control,  
comprising:

a hollow tube having an open end and a closed end;

a piston positioned inside the hollow tube, wherein the piston creates a first space between a first  
side of the piston and the open end and a second space between a second side of the piston  
and the closed end, the piston having a circumference in contact with the hollow tube;

a first fluid in the first space;

a force generating object in the second space; and

media associated with the hollow tube to provide at least one indication of the occurrence of a  
temperature rise in an ambient in which the sensor is immersed further comprising a feature for  
preventing movement of the first fluid in a frozen state within the first space, the feature selected  
from the group consisting of a ring-shaped concavity and a shrivel.

67. – 72 (cancelled)

73. (currently amended) ~~The sensor of Claim 71,~~ An indicator comprising:

a hollow elongated housing having an open end and a closed end;

a moveable piston positioned in the closed end of the hollow elongated housing;

a cap positioned in the open end of the hollow elongated housing;

a spring attached to the moveable piston and the cap; and

a fluid in the hollow elongated housing between the moveable piston and the cap, the fluid  
capable of being frozen;

said indicator further comprising a hole in the closed end of the hollow ~~form~~ elongated housing,  
the hole allowing air to flow into the hollow ~~form~~ elongated housing as the moveable piston  
moves within the hollow ~~form~~ elongated housing.

74.-79 (cancelled)

80. (new) The indicator of claim 1, wherein the cap is partially released by the frost action of the freezable fluid inside the second compartment, the frozen fluid being anchored by at least one internal rib located inside the second compartment.

81. (new) The indicator of claim 1, wherein the releasable cap maintains the freezable fluid inside the second compartment prior to the frost action.

82. (new) The indicator of claim 1, wherein the compressible means comprises a gaseous fluid.

83. (new) The indicator of claim 1, wherein the compressible means comprises a spring.

84. (new) The indicator of claim 1, wherein the compressible means comprises a spring and a gaseous fluid.

85. (new) The indicator of claim 1, wherein the freezable fluid prevents movement of the piston when the freezable fluid is frozen.

86. (new) The indicator of claim 1, wherein the cap is totally released by the frost action of the freezable fluid inside the second compartment, the frozen fluid being anchored by at least one internal rib located inside the second compartment.

87. (new) The indicator of claim 1, wherein the media associated with the tube to provide at least one indication of the occurrence of a temperature rise in an ambient in which the indicator is immersed comprises an engraving on the tube coinciding with the position of the piston inside the tube when the freezable fluid is frozen.

88. (new) The indicator of claims 1, further comprising movable laminar petals positioned inside the tube between the first compartment and the second compartment.

89. (new) The indicator of claim 88, wherein the movable laminar petals exhibit a closed

position when the freezable fluid is in the frozen state inside the first compartment.

90. (new) The indicator of claim 88, wherein the movable laminar petals exhibit an open position when the freezable fluid is in a non-frozen or partially thawed state inside the first compartment.

91. (new) The indicator of claim 88, wherein the color of the movable laminar petals and the color of the piston are contrasting.

92. (new) The indicator of claim 1, further comprising at least one thermal insulator surrounding at least a portion of the indicator.

93. (new) The indicator of claim 1, wherein the releasable cap and the tube are connected by a securement means keeping the releasable cap connected to the tube when the releasable cap is detached from the open end of the tube.

94. (new) The indicator of claim 1, further comprising a collecting receptor for collecting any freezable fluid that flows out the first compartment of the tube.

95. (new) The indicator of claim 1, wherein the collecting receptor comprising an absorbent material for absorbing any freezable fluid in liquid state that flows out the tube.

96. (new) The indicator of claim 94, wherein the absorbent material comprises an absorbent material capable of reacting with the freezable fluid in liquid state to promote a color alteration of the absorbent material.

97. (new) The indicator of claim 1, further comprising a course limiter inside the tube to limit the movement of the piston inside the tube.

98. (new) The indicator of claim 97, wherein the course limiter is located inside the first compartment.

99. (new) The indicator of claim 97, wherein the course limiter is located inside the second compartment.

100. (new) The indicator of claim 1, further comprising a hole in the closed end of the tube, the hole allowing air to flow into the tube as the moveable piston moves axially inside the tube.

101. (new) The indicator of claim 1, further comprising at least one additive mixed with the freezable fluid, wherein the said additive comprising a gel, salts, fluid freezing modifiers and fluid thawing modifiers.

102. (new) The indicator of claim 1, further comprising a granulated solid material mixed with the freezable fluid, wherein the granulated solid material promotes nucleation of the freezable fluid.

103. (new) The indicator of claim 1, further comprising an additive mixed with the freezable fluid, wherein the said additive comprising dye, pigment and coloring material.

104. (new) The indicator of claim 1, further comprising spaced marks on the tube.

105. (new) Temperature sensitive indicator comprising:

- a tube that comprises a first open end and a second closed end,
- an axially movable slidable piston to be assembled inside the tube forming a first compartment comprised between the piston and the closed end and a second compartment comprised between the piston and the open end;
- compressible means to be located inside the first compartment inside the tube;
- a freezable fluid to be located in a second compartment inside the tube;

- an releasable cap to cover the first open end of the tube and to be responsible to hold the freezable fluid;

wherein the temperature sensitive indicator is activated when the releasable cap is partially released by the frost action of the freezable fluid inside the second compartment, and wherein the cap and the freezable fluid prevent the movement of the piston.

106. (new) The indicator of claim 105, wherein the releasable cap maintains the freezable fluid inside the second compartment prior to the frost action.

107. (new) The indicator of claim 105, wherein the compressible means comprises a gaseous fluid.

108. (new) The indicator of claim 105, wherein the compressible means comprises a spring.

109. (new) The indicator of claim 105, wherein the compressible means comprises a spring and a gaseous fluid.

110. (new) The indicator of claim 105, wherein the freezable fluid prevents movement of the piston when the freezable fluid is frozen.

111. (new) The indicator of claim 105, wherein the cap is partially released by the frost action of the freezable fluid inside the second compartment, the frozen fluid being anchored by at least one internal rib.

112. (new) The indicator of claim 111, wherein the rib is located inside the second compartment.

113. (new) The indicator of claim 105, wherein the media associated with the tube to provide at least one indication of the occurrence of a temperature rise in an ambient in which the indicator is immersed comprises an engraving on the tube coinciding with the position of the



piston inside the tube when the freezable fluid is frozen.

114. (new) The indicator of claims 105, further comprising movable laminar petals positioned inside the tube between the first compartment and the second compartment.

115. (new) The indicator of claim 114, wherein the movable laminar petals exhibit a closed position when the freezable fluid is in the frozen state inside the first compartment.

116. (new) The indicator of claim 114, wherein the movable laminar petals exhibit an open position when the freezable fluid is in a non-frozen or partially thawed state inside the first compartment.

117. (new) The indicator of claim 114, wherein the color of the movable laminar petals and the color of the piston are contrasting.

118. (new) The indicator of claim 105, further comprising at least one thermal insulator surrounding at least a portion of the indicator.

119. (new) The indicator of claim 105, wherein the releasable cap and the tube are connected by a securement means keeping the releasable cap connected to the tube when the releasable cap is detached from the open end of the tube.

120. (new) The indicator of claim 105, further comprising a collecting receptor for collecting any freezable fluid that flows out the first compartment of the tube.

121. (new) The indicator of claim 105, wherein the collecting receptor comprising an absorbent material for absorbing any freezable fluid in liquid state that flows out the tube.

122. (new) The indicator of claim 120, wherein the absorbent material comprises an absorbent material capable of reacting with the freezable fluid in liquid state to promote a color alteration of the absorbent material.

123. (new) The indicator of claim 105, further comprising at least one internal rib to be located inside the second compartment inside the tube and to be responsible to anchor the freezable fluid inside the second compartment.

124. (new) The indicator of claim 105, further comprising a course limiter inside the tube to limit the movement of the piston inside the tube.

125. (new) The indicator of claim 124, wherein the course limiter is located inside the first compartment.

126. (new) The indicator of claim 124, wherein the course limiter is located inside the second compartment.

127. (new) The indicator of claim 105, further comprising a hole in the closed end of the tube, the hole allowing air to flow into the tube as the moveable piston moves axially inside the tube.

128. (new) The indicator of claim 105, further comprising at least one additive mixed with the freezable fluid, wherein the said additive comprising a gel, salts, fluid freezing modifiers and fluid thawing modifiers.

129. (new) The indicator of claim 105, further comprising a granulated solid material mixed with the freezable fluid, wherein the granulated solid material promotes nucleation of the freezable fluid.

130. (new) The indicator of claim 105, further comprising an additive mixed with the freezable fluid, wherein the said additive comprising dye, pigment and coloring material.

131. (new) The indicator of claim 105, further comprising spaced marks on the tube.

132. (new) Temperature sensitive indicator comprising

- a tube that comprises a first open end and a second closed end,
- an axially movable slidable piston to be assembled inside the tube forming a first compartment comprised between the piston and the closed end and a second compartment comprised between the piston and the open end;
- compressible means to be located inside the first compartment inside the tube;
- a freezable fluid to be located in a second compartment inside the tube;

wherein the temperature sensitive indicator is activated by the frost action of the freezable fluid inside the second compartment and the temperature sensitive indicator reveals the occurrence of the temperature increase in the environment in which the indicator is immersed by the irreversible motion of the piston in a single direction inside the tube when the freezable fluid inside the second compartment thaws and flows out the tube.

133. The indicator of claim 132, wherein the compressible means comprises a gaseous fluid.

134. (new) The indicator of claim 132, wherein the compressible means comprises a spring.

135. (new) The indicator of claim 132, wherein the compressible means comprises a spring and a gaseous fluid.

136. (new) The indicator of claim 132, wherein the freezable fluid prevents movement of the piston when the freezable fluid is frozen.

137. (new) The indicator of claim 132, wherein the media associated with the tube to provide at least one indication of the occurrence of a temperature rise in an ambient in which the indicator is immersed comprises an engraving on the tube coinciding with the position of the

piston inside the tube when the freezable fluid is frozen.

138. (new) The indicator of claim 132, further comprising movable laminar petals positioned inside the tube between the first compartment and the second compartment.

139. (new) The indicator of claim 138, wherein the movable laminar petals exhibit a closed position when the freezable fluid is in the frozen state inside the first compartment.

140. (new) The indicator of claim 138, wherein the movable laminar petals exhibit an open position when the freezable fluid is in a non-frozen or partially thawed state inside the first compartment.

141. (new) The indicator of claim 138, wherein the color of the movable laminar petals and the color of the piston are contrasting.

142. (new) The indicator of claim 132, further comprising at least one thermal insulator surrounding at least a portion of the indicator.

143. (new) The indicator of claim 132, further comprising a collecting receptor for collecting any freezable fluid that flows out the first compartment of the tube.

144. (new) The indicator of claim 132, wherein the collecting receptor comprising an absorbent material for absorbing any freezable fluid in liquid state that flows out the tube.

145. (new) The indicator of claim 144, wherein the absorbent material comprises an absorbent material capable of reacting with the freezable fluid in liquid state to promote a color alteration of the absorbent material.

144. (new) The indicator of claim 132, further comprising at least one internal rib to be located inside the second compartment inside the tube and to be responsible to increase the friction between the freezable fluid inside the second compartment and the said tube while the

said fluid is frozen.

147. (new) The indicator of claim 132, further comprising a breakable thin membrane attached to the open end of the tube, wherein the thin membrane maintains the freezable fluid inside the second compartment of the tube.

148. (new) The indicator of claim 132, further comprising a course limiter inside the tube to limit the movement of the piston inside the tube.

149. (new) The indicator of claim 148, wherein the course limiter is located inside the first compartment.

150. (new) The indicator of claim 148, wherein the course limiter is located inside the second compartment.

151. (new) The indicator of claim 132, further comprising a hole in the closed end of the tube, the hole allowing air to flow into the tube as the moveable piston moves axially inside the tube.

152. (new) The indicator of claim 132, further comprising at least one additive mixed with the freezable fluid, wherein the said additive comprising a gel, salts, fluid freezing modifiers and fluid thawing modifiers.

153. (new) The indicator of claim 132, further comprising a granulated solid material mixed with the freezable fluid, wherein the granulated solid material promotes nucleation of the freezable fluid.

154. (new) The indicator of claim 132, further comprising an additive mixed with the freezable fluid, wherein the said additive comprising dye, pigment and coloring material.

155. (new) The indicator of claim 132, further comprising spaced marks on the tube.

156. (new) A method for monitoring frozen goods, comprising a temperature sensitive indicator within the vicinity of a frozen good to be monitored, the indicator comprising a tube that comprises a first open end and a second closed end, an axially movable slidable piston to be assembled inside the tube forming a first compartment and a second compartment, a compressible means located inside the first compartment of the tube, a freezable fluid located in the second compartment of the tube and an releasable cap to cover the first open end of the tube; wherein the method for monitoring frozen goods comprises the steps of;

- (i) placing the temperature sensitive indicator close to the frozen good;
- (ii) activating the indicator by the frost action of the freezable fluid inside the second compartment and releasing the releasable cap;
- (iii) when the environmental temperature increases, forcing the thaw fluid to flow out of the tube, through a force exerted by the compressible means.

157. (new) The method of claim 156, wherein placing the sensor within the vicinity of a frozen good comprises placing at least one indicator at a location relative to the frozen good, wherein the location is selected from the group consisting of placing at least one indicator on the outside of the frozen good, placing the at least one indicator in the frozen good, and placing the at least one indicator in a blister pack with the frozen good.